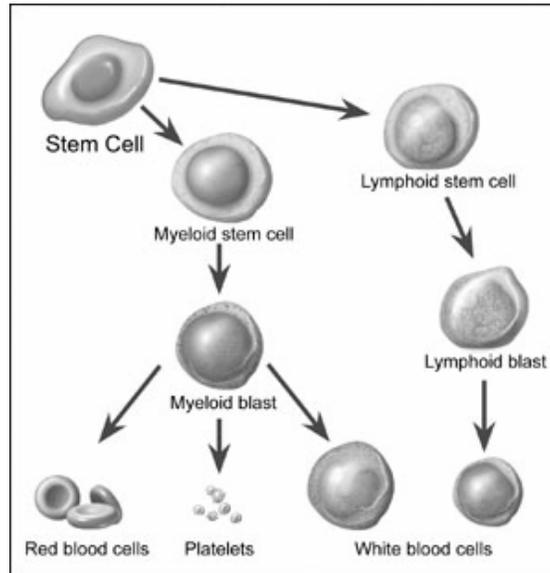


LEUKEMIA

LEUKEMIA

GENERAL PROFILE⁴

Figure 127. Anatomy of Stem Cell Maturation



General Anatomy: Blood cells form in the bone marrow, which is the soft material in the center of most bones. Immature blood cells are called stem cells and blasts. Most blood cells mature in the bone marrow and then move into the blood vessels. The bone marrow makes different types of blood cells; each with a special function: White blood cells fight infection, red blood cells carry oxygen to body tissues, and platelets help form blood clots to speed healing. With leukemia, the bone marrow produces abnormal white blood cells. At first, leukemia cells function almost normally. In time, they may crowd out normal white blood cells, red blood cells, and platelets.

Risk Factors: Very high levels of radiation, working with certain chemicals (e.g. Benzene, Formaldehyde), chemotherapy, Down's syndrome, human T-cell leukemia virus-I (HTLV-I), and myelodysplastic syndrome.

Signs and Symptoms: Fevers or night sweats, frequent infections, feeling weak or tired, headache, bleeding and bruising easily (bleeding gums, purplish patches in the skin, or tiny red spots under the skin), pain in the bones or joints, swelling or discomfort in the abdomen (from an enlarged spleen), swollen lymph nodes, especially in the neck or armpit, and weight loss.

Diagnosing the Cancer: Health exams, blood tests (High level of white blood cells, low levels of red blood cells and platelets), bone marrow aspiration, bone marrow biopsy, cytogenetics, spinal tap, and chest x-ray.

Treatment: chemotherapy (intrathecal), biological therapy, radiation therapy, or stem cell transplantation (bone marrow, peripheral stem cell and umbilical cord blood transplantations).

HIGHLIGHTS

- The ratio of the age-adjusted incidence rate, 12.0, to the age-adjusted mortality rate, 7.4 (per 100,000 – 2000 US Standard population), for Leukemia was 1.62 during the 1997 to 2001 period. This means that for every 1.62 Leukemia cases during this period, there was one Leukemia death in Nevada.
- Nevadan females had a slightly higher ratio than males when the age-adjusted incidence and age-adjusted mortality rates for Leukemia were compared. For every female death due to Leukemia there were 1.75 female cases while only 1.71 male cases for every male Leukemia death in Nevada from 1997 to 2001.
- The median age at diagnosis of Leukemia was 66 years of age for Nevada residents from 1997 to 2001; the median age at time of death was 72 years.

INCIDENCE

- There were 1,059 cases of Leukemia in Nevada from 1997 to 2001. Regional comparisons showed little variation between Clark County (12.6), All Other Counties (10.9) and Washoe County (10.9) from 1997 to 2001. Churchill County had the highest age adjusted rate (19.2). While the age-adjusted incidence rates for All Other Counties and Washoe County were slightly lower than the National rate of 12.1 (per 100,000 – 2000 US Standard population) statistical analysis does not show a significant difference between any of the areas.
- The age-adjusted incidence rate for male Leukemia, 15.0 (13.7-16.3), was statistically significant over the rate for females, 9.4 (8.5-10.4), during the 1997 to 2001 period.
- Whites, as a racial/ethnic group, had the highest age-adjusted incidence rate from Leukemia during the 1997 to 2001 period at 13.3 (12.5-14.3). They were followed by Blacks, Hispanics and Asians, who had rates of 8.7, 6.7 and 5.2, (per 100,000 – 2000 US Standard population), respectively.

INPATIENT HOSPITAL DISCHARGES

- Statistical regional comparisons indicate that Clark County had the highest age-adjusted inpatient discharge rate for Leukemia, 13.0 (12.1-14.0), and was followed by All Other Counties, 9.6 (8.0-11.4), and Washoe County, 8.8 (7.4-10.5) (per 100,000 – 2000 US Standard population), from 1997 to 2001.
- Clark County had the highest median total charge (\$65,670) followed by All Other Counties (\$53,299) and Washoe County (\$41,157) as a region, during the 1997 to 2001 period.
- Total billed charges for hospital inpatient discharges from Leukemia in Nevada totaled approximately 65.8 million dollars from 1997 to 2001. The overall average billed charge

per day for an inpatient hospital discharge for Leukemia was approximately \$4,802 in Nevada during this time. The average length of stay for an inpatient hospital discharge for Leukemia as 12.7 days during this time period.

MORTALITY

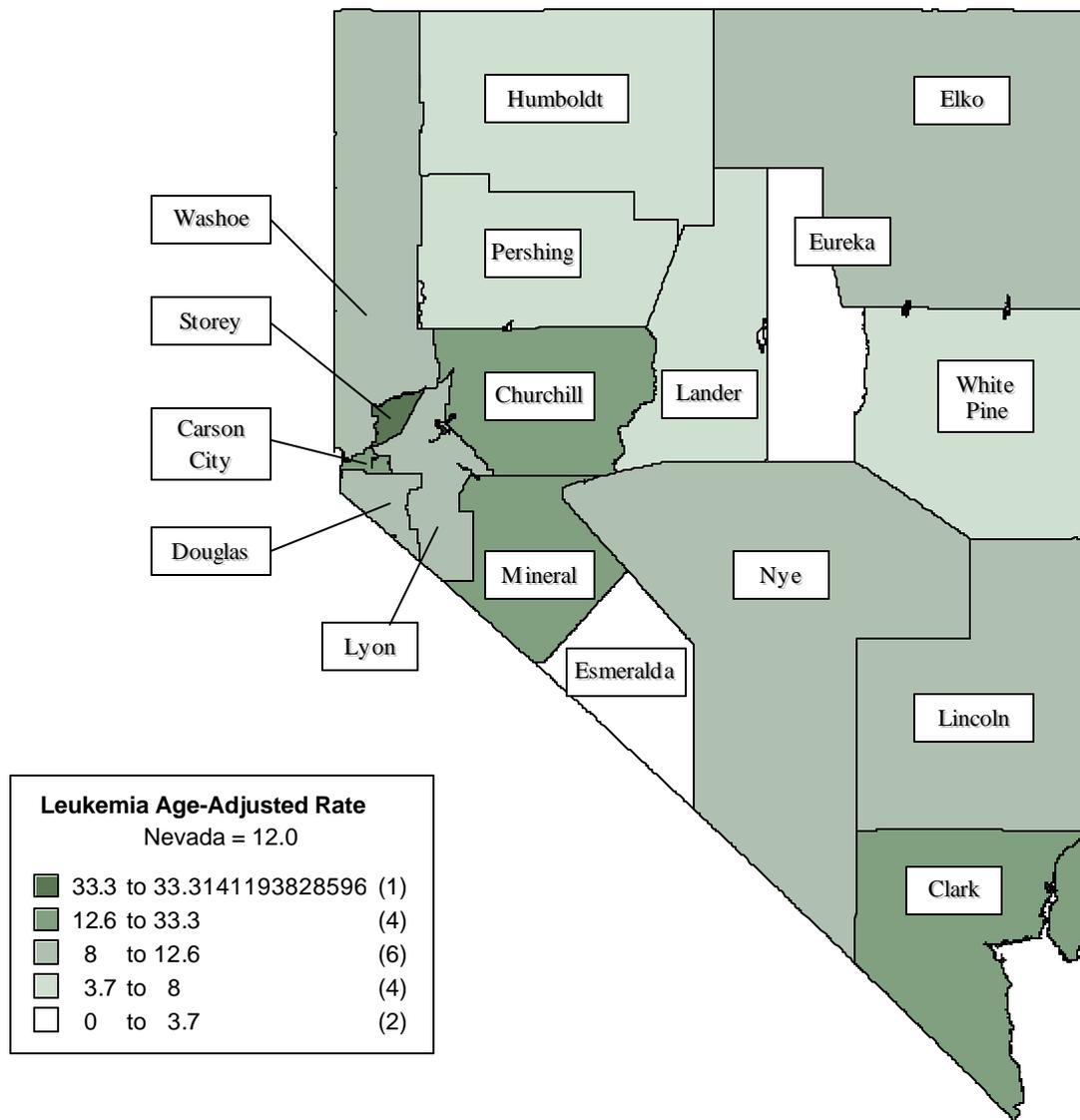
- There were 614 Leukemia deaths from 1997 to 2001. While, Clark County as a region, had a higher age-adjusted mortality rate (7.6), than Washoe County (7.2) and All Other Counties (6.8), (per 100,000 – 2000 US Standard population), none of the rates show any statistically significant difference exists between the three regions.
- Males had a statistically higher age-adjusted mortality rate due to Leukemia, 9.5 (8.5-10.7), than their Female counterparts' rate, 5.6 (4.9-6.3), in Nevada from 1997 to 2001.

SURVIVAL RATE

- The one-year survival rate for Leukemia in Nevada was 55.9% during the 1996 to 2001 period, while the five-year survival rate was 30.5%. The median survival rate in Nevada for Leukemia was 1.60 years.
- While females in Nevada diagnosed with Leukemia had a higher one-year survival rate (57.1%) than males (55.2%), their five-year survival rate (27.3%) was lower than the rate for males (33.3%) during the 1997 to 2001 period.
- Nevadan females had a slightly higher median survival time than their male counterparts with median survival times of 1.65 and 1.58 years, respectively, during the 1997 to 2001 period.

INCIDENCE

Figure 128. Leukemia Age-Adjusted (2001) Incidence Rates, Nevada Residents, 1997-2001



Note: Rates are per 100,000 population and age-adjusted to 2001 US Standard population. Caution should be used when interpreting rates based upon small numbers. See Technical notes for more information.

Figure 129. Leukemia Age-Adjusted Incidence Rates by County/Region of Residence, Nevada Residents, 1997-2001

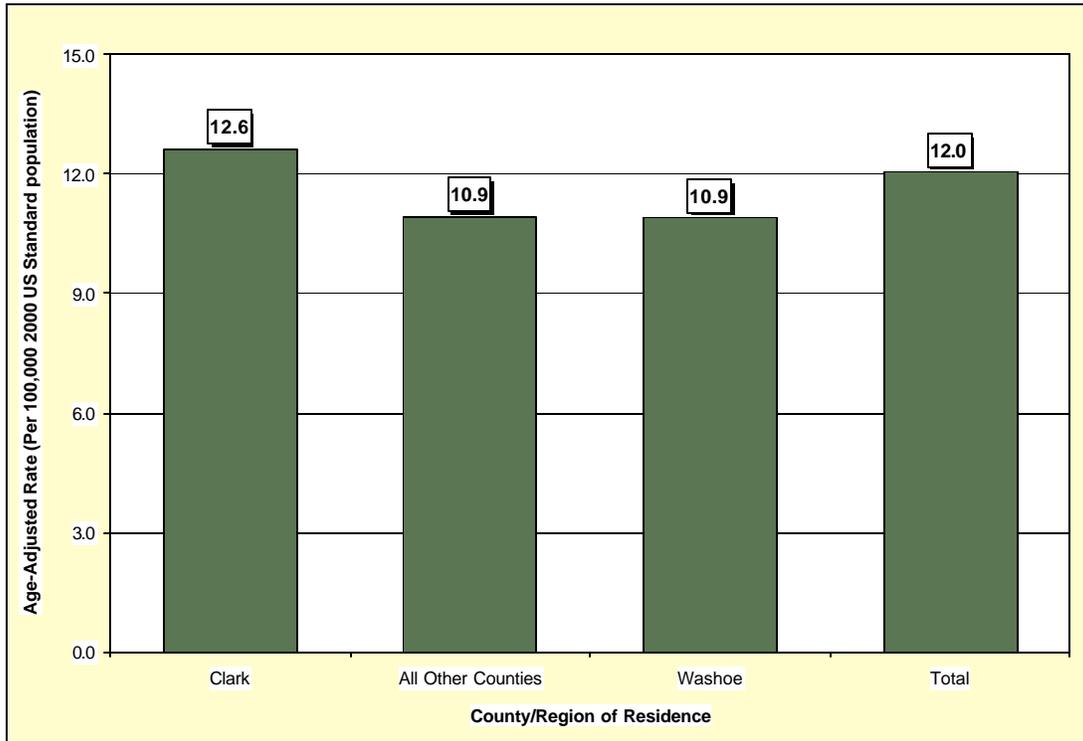


Figure 130. Leukemia Age-Adjusted Incidence Rates by Race/Ethnicity, Nevada Residents, 1997-2001

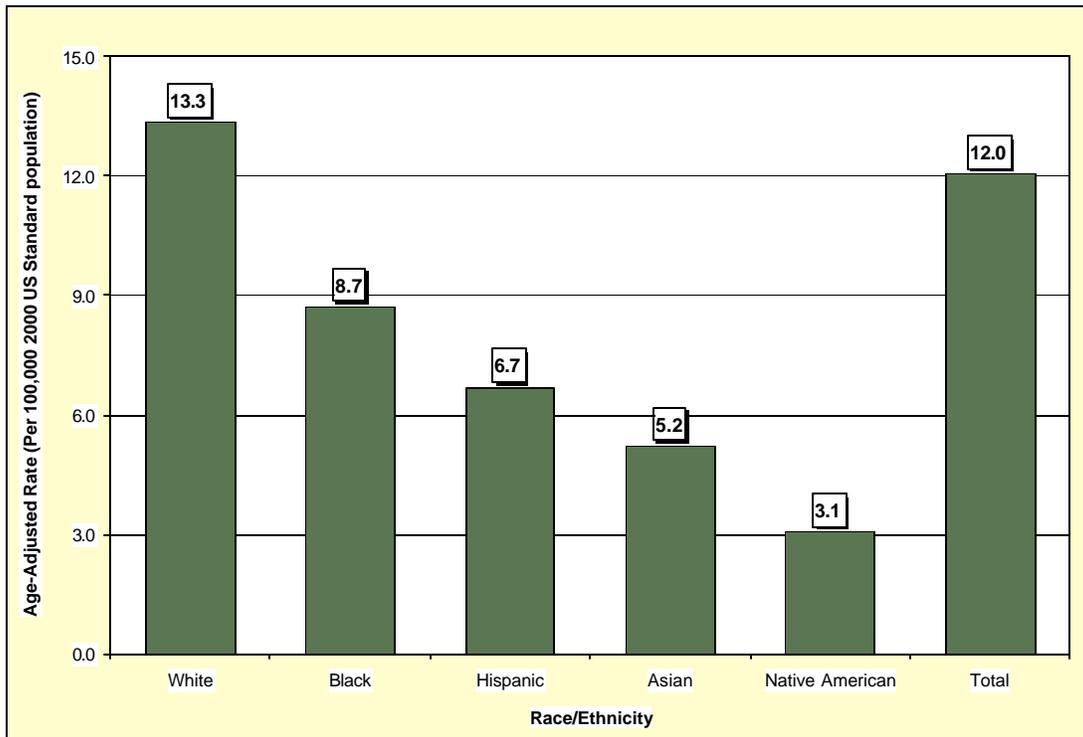


Table 192. Leukemia Cases by Gender, Race/Ethnicity and County/Region of Residence at Diagnosis, Nevada Residents (1997-2001) and SEER-11 (1997-2001)

Category	County/Region of Residence					SEER 11 (1997-2001)
	Nevada Total	Clark	Washoe	All Other Counties	Unknown	
Total						
Cases	1,059	742	163	153	1	21,418
Rate*	12.0	12.6	10.9	10.9	---	12.1
95% C.I.	(11.3-12.8)	(11.7-13.6)	(9.3-12.8)	(9.2-12.9)	---	(12.0-12.3)
Gender						
Male	629	449	92	87	1	12,200
Rate*	15.0	16.3	12.8	12.5	---	15.9
95% C.I.	(13.7-16.3)	(14.7-18.2)	(10.2-15.9)	(9.9-15.7)	---	(15.6-16.2)
Female	430	293	71	66	0	9,218
Rate*	9.4	9.6	9.0	9.3	---	9.4
95% C.I.	(8.6-10.4)	(8.5-10.8)	(7.0-11.4)	(7.2-11.9)	---	(9.2-9.6)
Other/Unknown	0	0	0	0	0	0
Race/Ethnicity						
White	920	640	143	137	0	18,176
Rate*	13.3	14.6	11.4	11.0	---	12.9
95% C.I.	(12.5-14.3)	(13.5-15.8)	(9.6-13.4)	(9.2-13.1)	---	(12.7-13.1)
Black	39	31	5	3	0	1,530
Rate*	8.7	7.5	---	---	---	9.9
95% C.I.	(5.9-12.8)	(4.8-11.7)	---	---	---	(9.4-10.4)
Native American	3	2	1	0	0	112
Rate*	---	---	---	---	---	5.0
95% C.I.	---	---	---	---	---	(4.0-4.0)
Asian	24	17	6	1	0	1,376
Rate*	5.2	4.6	---	---	---	7.5
95% C.I.	(3.3-10.4)	(2.6-11.2)	---	---	---	(7.1-8.0)
Hispanic	68	49	7	11	1	2,307
Rate*	6.7	5.9	---	13.1	---	9.1
95% C.I.	(4.7-9.8)	(3.9-9.4)	---	(5.3-30.2)	---	(8.7-9.5)
Other/Unknown	5	3	1	1	0	224

* Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Note: The "----" is used for rates calculated on numbers less than ten and SEER numbers less than five. Caution should be used when comparing rates for racial/ethnic groups to the National (SEER) rates. See Technical Notes for more information.

Table 193. Leukemia Cases by Age Group and County/Region of Residence at Diagnosis, Nevada Residents (1997-2001) and SEER-11 (1997-2001)

Category	County/Region of Residence					SEER 11 (1997-2001)
	Nevada Total	Clark	Washoe	All Other Counties	Unknown	
Total						
Cases	1,059	742	163	153	1	21,418
Rate*	10.9	11.1	9.7	10.9	---	11.6
95% C.I.	(10.2-11.5)	(10.3-11.9)	(8.2-11.2)	(9.2-12.7)	---	(11.4-11.7)
Age Group						
<1	7	6	0	1	0	123
Rate*	---	---	---	---	---	4.4
95% C.I.	---	---	---	---	---	(3.7-5.2)
1-4	53	40	4	9	0	944
Rate*	9.3	10.0	---	---	---	8.5
95% C.I.	(6.8-11.9)	(6.9-13.1)	---	---	---	(7.9-9.0)
5-14	55	37	10	8	0	998
Rate*	4.0	3.9	4.4	---	---	3.7
95% C.I.	(2.9-5.0)	(2.7-5.2)	(1.7-7.1)	---	---	(3.5-4.0)
15-24	30	22	2	6	0	665
Rate*	2.2	2.4	---	---	---	2.6
95% C.I.	(1.4-3.0)	(1.4-3.4)	---	---	---	(2.4-2.8)
25-34	38	29	6	2	1	819
Rate*	2.6	2.7	---	---	---	2.8
95% C.I.	(1.8-3.4)	(1.7-3.7)	---	---	---	(2.6-3.0)
35-44	59	41	14	4	0	1,293
Rate*	3.8	3.9	4.9	---	---	4.1
95% C.I.	(2.8-4.8)	(2.7-5.1)	(2.4-7.5)	---	---	(3.9-4.4)
45-54	97	71	13	13	0	2,069
Rate*	7.6	8.4	5.5	6.5	---	9.0
95% C.I.	(6.1-9.1)	(6.4-10.3)	(2.5-8.5)	(3.0-10.0)	---	(8.7-9.4)
55-64	158	111	25	22	0	2,914
Rate*	17.2	17.9	16.7	15.2	---	20.8
95% C.I.	(14.6-19.9)	(14.5-21.2)	(10.1-23.2)	(8.9-21.6)	---	(20.1-21.6)
65-74	261	181	37	43	0	4,509
Rate*	40.6	41.8	36.1	40.1	---	39.1
95% C.I.	(35.7-45.6)	(35.8-47.9)	(24.5-47.7)	(28.1-52.1)	---	(37.9-40.2)
75-84	226	151	44	31	0	4,931
Rate*	64.3	64.7	76.1	51.8	---	67.8
95% C.I.	(55.9-72.7)	(54.3-75.0)	(53.6-98.6)	(33.5-70.0)	---	(65.9-69.7)
85+	74	52	8	14	0	2,153
Rate*	97.1	111.4	---	99.8	---	86.8
95% C.I.	(75.0-119.2)	(81.1-141.6)	---	(47.5-152.0)	---	(83.1-90.5)
Unknown	1	1	0	0	0	0

* Rates are per 100,000 age-specific population.

Note: The “---” is used for rates calculated on numbers less than ten and SEER numbers less than five. See Technical Notes for more information.

Table 194. Leukemia Cases by County of Residence at Diagnosis, Nevada Residents, 1997-2001

County of Residence at Diagnosis	1997-2001 Incidence				
	Cases	Rate*		Age-Adjusted Rate**	
		Rate	95% C.I.	Rate	95% C.I.
Carson City	40	16.1	(11.1-21.0)	14.6	(10.4-20.1)
Churchill	23	19.1	(11.3-26.9)	19.2	(12.1-29.5)
Clark	742	11.1	(10.3-11.9)	12.6	(11.7-13.6)
Douglas	23	11.2	(6.6-15.8)	9.7	(6.0-15.4)
Elko	13	5.6	(2.6-8.7)	10.0	(4.9-18.9)
Esmeralda	0	---	---	---	---
Eureka	0	---	---	---	---
Humboldt	3	---	---	---	---
Lander	2	---	---	---	---
Lincoln	2	---	---	---	---
Lyon	15	8.8	(4.4-13.3)	8.0	(4.4-13.9)
Mineral	5	---	---	---	---
Nye	19	12.1	(6.7-17.5)	8.8	(5.2-15.1)
Pershing	1	---	---	---	---
Storey	4	---	---	---	---
Washoe	163	9.7	(8.2-11.2)	10.9	(9.3-12.8)
White Pine	3	---	---	---	---
Unknown	1	---	---	---	---
Total	1,059	10.9	(10.2-11.5)	12.0	(11.3-12.8)

Note: The “---” is used for rates calculated on numbers less than ten. *Rates are per 100,000 population. **Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Table 195. Leukemia Cases by Race/Ethnicity and Gender, Nevada Residents, 1997-2001

Race/Ethnicity		Gender			
		Male	Female	Other/Unknown	Total
White	Incidence	548	372	0	920
	Rate*	16.5	10.5	---	13.3
	95% C.I.	(15.1-18.1)	(9.4-11.6)	---	(12.5-14.3)
Black	Incidence	22	17	0	39
	Rate*	10.1	7.5	---	8.7
	95% C.I.	(5.6-19.2)	(4.1-12.8)	---	(5.9-12.8)
Native American	Incidence	2	1	0	3
	Rate*	---	---	---	---
	95% C.I.	---	---	---	---
Asian	Incidence	14	10	0	24
	Rate*	6.7	4.0	---	5.2
	95% C.I.	(3.5-18.0)	(1.9-12.7)	---	(3.3-10.4)
Hispanic	Incidence	39	29	0	68
	Rate*	8.5	5.5	---	6.7
	95% C.I.	(4.8-15.9)	(3.3-9.4)	---	(4.7-9.8)
Other/Unknown		4	1	0	5
Total	Incidence	629	430	0	1,059
	Rate*	15.0	9.4	---	12.0
	95% C.I.	(13.7-16.3)	(8.6-10.4)	---	(11.3-12.8)

Note: The “---” is used for rates calculated on numbers less than ten. *Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Table 196. Leukemia Cases by Age Group and Gender, Nevada Residents, 1997-2001

Age Group	Gender			
	Male	Female	Other/ Unknown	Total
<1	5	2	0	7
Rate*	---	---	---	---
95% C.I.	---	---	---	---
1-4	31	22	0	53
Rate*	10.7	7.9	---	9.3
95% C.I.	(6.9-14.5)	(4.6-11.2)	---	(6.8-11.9)
5-14	35	20	0	55
Rate*	4.9	3.0	---	4.0
95% C.I.	(3.3-6.6)	(1.7-4.3)	---	(2.9-5.0)
15-24	19	11	0	30
Rate*	2.7	1.7	---	2.2
95% C.I.	(1.5-4.0)	(0.7-2.7)	---	(1.4-3.0)
25-34	17	21	0	38
Rate*	2.2	3.0	---	2.6
95% C.I.	(1.2-3.3)	(1.7-4.2)	---	(1.8-3.4)
35-44	34	25	0	59
Rate*	4.2	3.3	---	3.8
95% C.I.	(2.8-5.6)	(2.0-4.6)	---	(2.8-4.8)
45-54	60	37	0	97
Rate*	9.2	5.8	---	7.6
95% C.I.	(6.9-11.6)	(4.0-7.7)	---	(6.1-9.1)
55-64	97	61	0	158
Rate*	21.3	13.2	---	17.2
95% C.I.	(17.1-25.6)	(9.9-16.5)	---	(14.6-19.9)
65-74	168	93	0	261
Rate*	53.0	28.6	---	40.6
95% C.I.	(45.0-61.0)	(22.8-34.4)	---	(35.7-45.6)
75-84	133	93	0	226
Rate*	83.9	48.2	---	64.3
95% C.I.	(69.6-98.2)	(38.4-58.1)	---	(55.9-72.7)
85+	29	45	0	74
Rate*	117.2	87.4	---	97.1
95% C.I.	(74.5-159.8)	(61.9-112.9)	---	(75.0-119.2)
Unknown	1	0	0	1
Total	629	430	0	1,059
Rate*	12.7	9.0	---	10.9
95% C.I.	(11.7-13.7)	(8.1-9.8)	---	(10.2-11.5)

* Rates are per 100,000 age-specific population.

Note: The "----" is used for rates calculated on numbers less than ten.

Table 197. Leukemia Incidence by Age Group and Stage, Nevada Residents, 1997-2001

Age Group		Stage					Total
		In situ	Localized	Regional	Distant	Unstaged	
<1	Number	0	0	0	6	1	7
	Percent	---	---	---	85.7%	14.3%	100.0%
1-4	Number	0	0	0	53	0	53
	Percent	---	---	---	100.0%	---	100.0%
5-14	Number	0	0	0	55	0	55
	Percent	---	---	---	100.0%	---	100.0%
15-24	Number	0	0	0	30	0	30
	Percent	---	---	---	100.0%	---	100.0%
25-34	Number	0	0	0	37	1	38
	Percent	---	---	---	97.4%	2.6%	100.0%
35-44	Number	0	0	0	57	2	59
	Percent	---	---	---	96.6%	3.4%	100.0%
45-54	Number	0	0	0	92	5	97
	Percent	---	---	---	94.8%	5.2%	100.0%
55-64	Number	0	0	0	157	1	158
	Percent	---	---	---	99.4%	0.6%	100.0%
65-74	Number	0	0	0	251	10	261
	Percent	---	---	---	96.2%	3.8%	100.0%
75-84	Number	0	0	0	211	15	226
	Percent	---	---	---	93.4%	6.6%	100.0%
85+	Number	0	0	0	64	10	74
	Percent	---	---	---	86.5%	13.5%	100.0%
Unknown	Number	0	0	0	1	0	1
	Percent	---	---	---	100.0%	---	100.0%
Total	Number	0	0	0	1,014	45	1,059
	Percent	---	---	---	95.8%	4.2%	100.0%

Table 198. Leukemia Cases by Stage and Race/Ethnicity, Nevada Residents, 1997-2001

Stage		Race/Ethnicity						Total
		White	Black	Native American	Asian	Hispanic	Other/Unknown	
In situ	Number	0	0	0	0	0	0	0
	Percent	---	---	---	---	---	---	---
Localized	Number	0	0	0	0	0	0	0
	Percent	---	---	---	---	---	---	---
Regional	Number	0	0	0	0	0	0	0
	Percent	---	---	---	---	---	---	---
Distant	Number	879	38	3	24	65	5	1,014
	Percent	95.5%	97.4%	100.0%	100.0%	95.6%	100.0%	95.8%
Unstaged	Number	41	1	0	0	3	0	45
	Percent	4.5%	2.6%	---	---	4.4%	---	4.2%
Total	Number	920	39	3	24	68	5	1,059
	Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

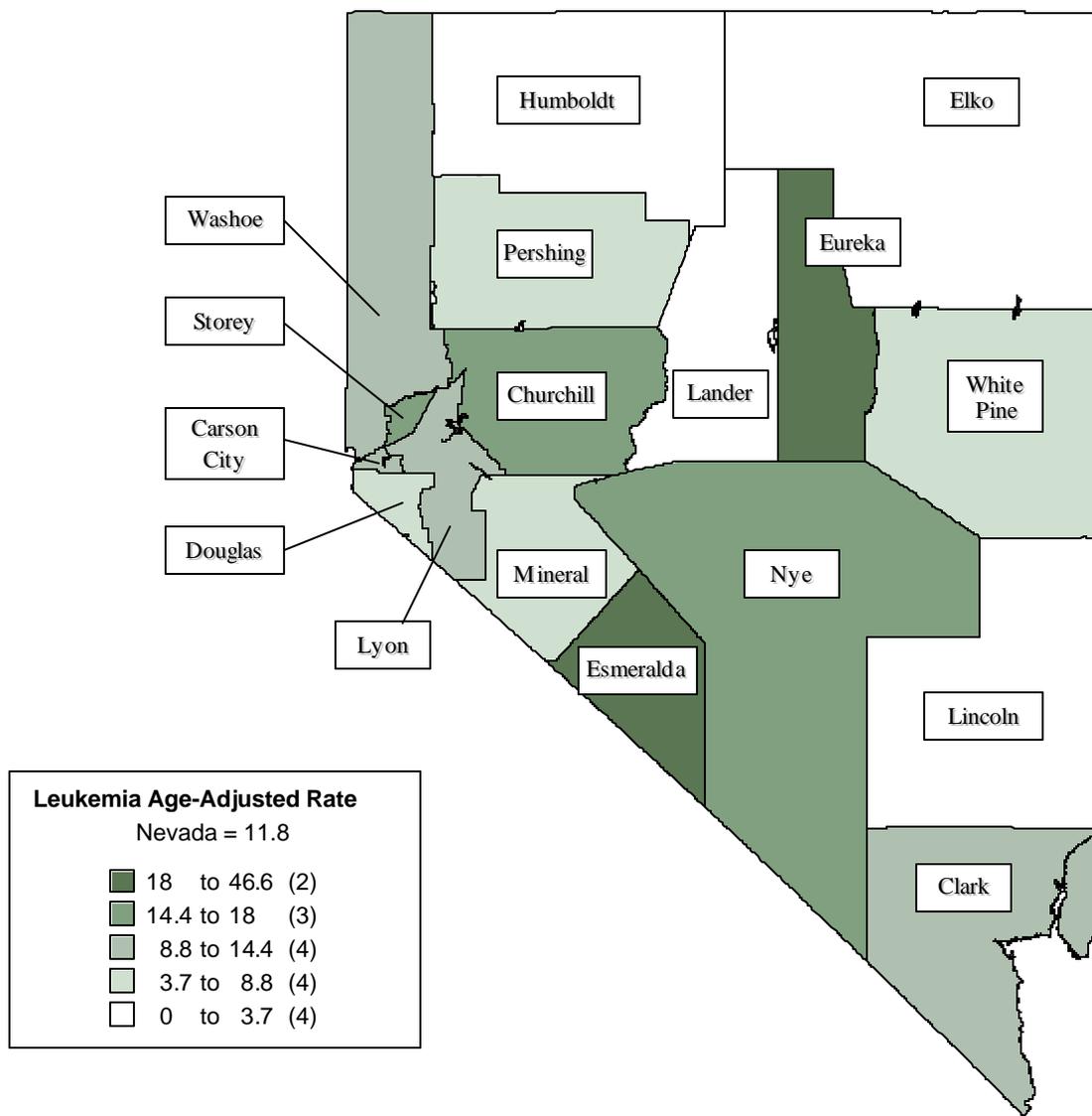
Table 199. Median Age at Diagnosis of Leukemia by Race/Ethnicity and Gender, Nevada Residents, 1997-2001

Race/Ethnicity	Gender					
	Male		Female		Total	
	Incidence	Median Age	Incidence	Median Age	Incidence	Median Age
White	547	68.0	372	69.0	919	68.0
Black	22	57.5	17	64.0	39	59.0
Native American	2	---	1	---	3	---
Asian	14	51.5	10	58.5	24	58.5
Hispanic	39	22.0	29	41.0	68	35.0
Other/Unknown	4	---	1	---	5	65.0
Total	628	66.0	430	66.0	1,058	66.0

Note: Those cases of other/unknown gender and/or unknown ages are not included in this table. The median age was not calculated for those numbers less than five.

INPATIENT HOSPITAL DISCHARGES

Figure 131. Leukemia Age-Adjusted (2001) Inpatient Discharge Rates, Nevada Residents, 1997-2001



Note: Rates are per 100,000 population and age-adjusted to 2001 US Standard population. Caution should be used when interpreting rates based upon small numbers and comparing inpatient hospital discharge rates to other data sources, because it is occurrence based data. See Technical notes for more information.

Figure 132. Leukemia Age-Adjusted Inpatient Discharge Rates by County/Region of Residence, Nevada Residents, 1997-2001

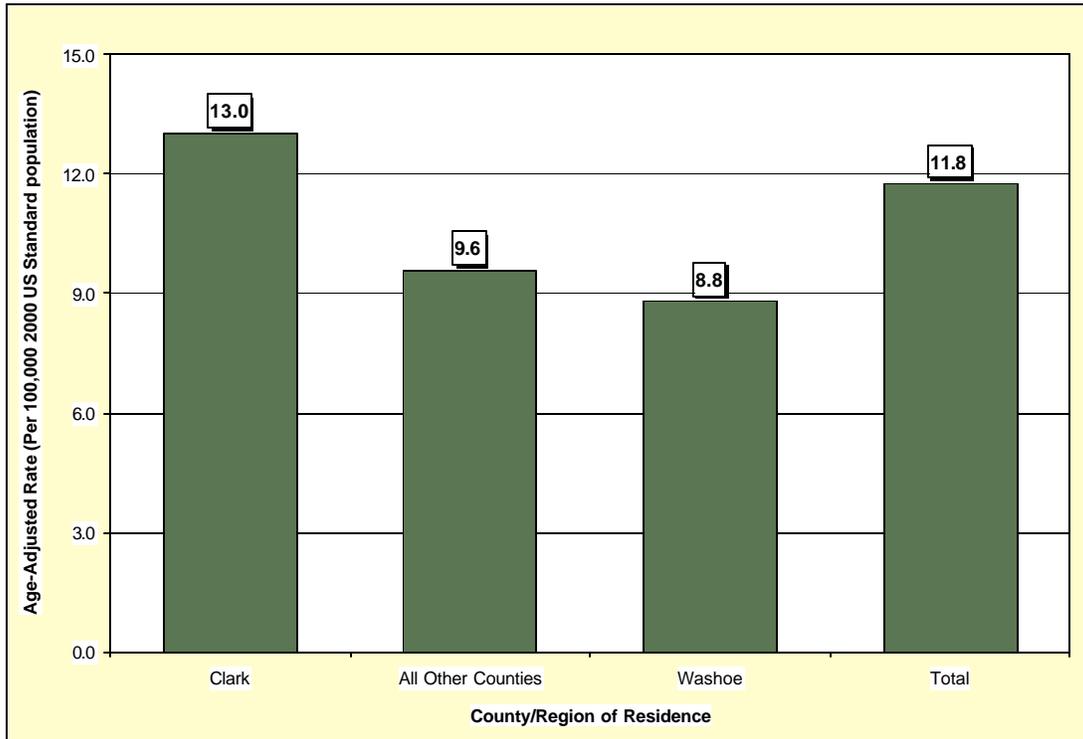


Figure 133. Median Charges for Leukemia Inpatient Discharges by County/Region of Residence, Nevada Residents, 1997-2001

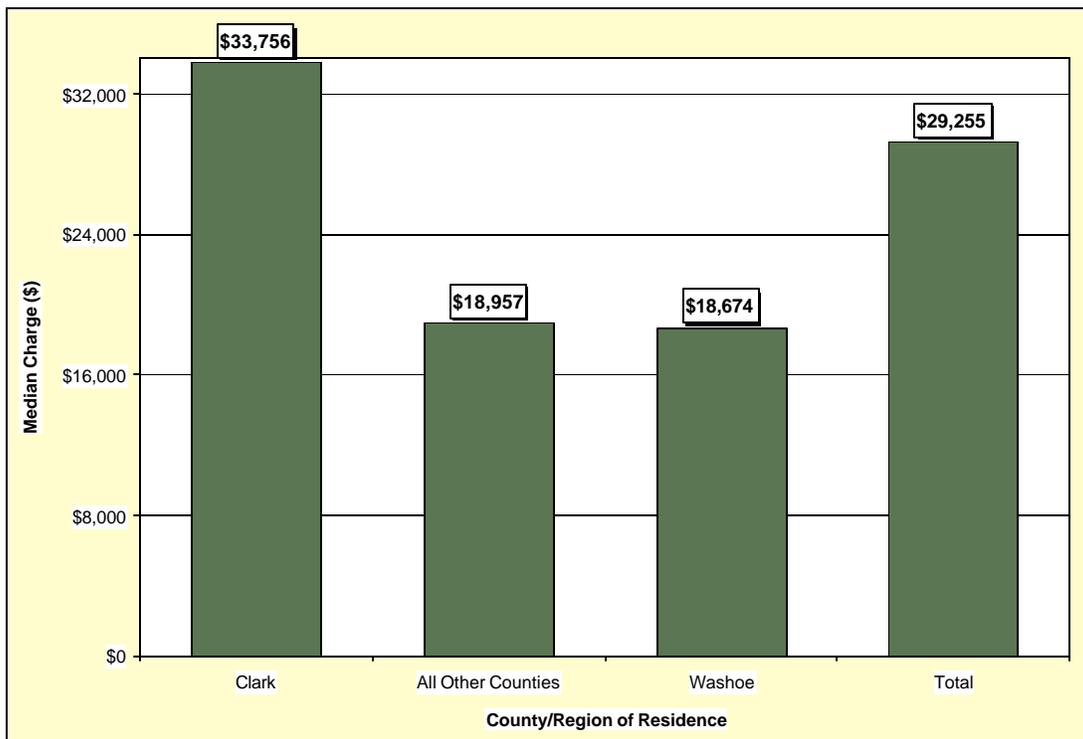


Figure 134. Average Length of Stay for Leukemia Inpatient Discharges by County/Region of Residence, Nevada Residents, 1997-2001

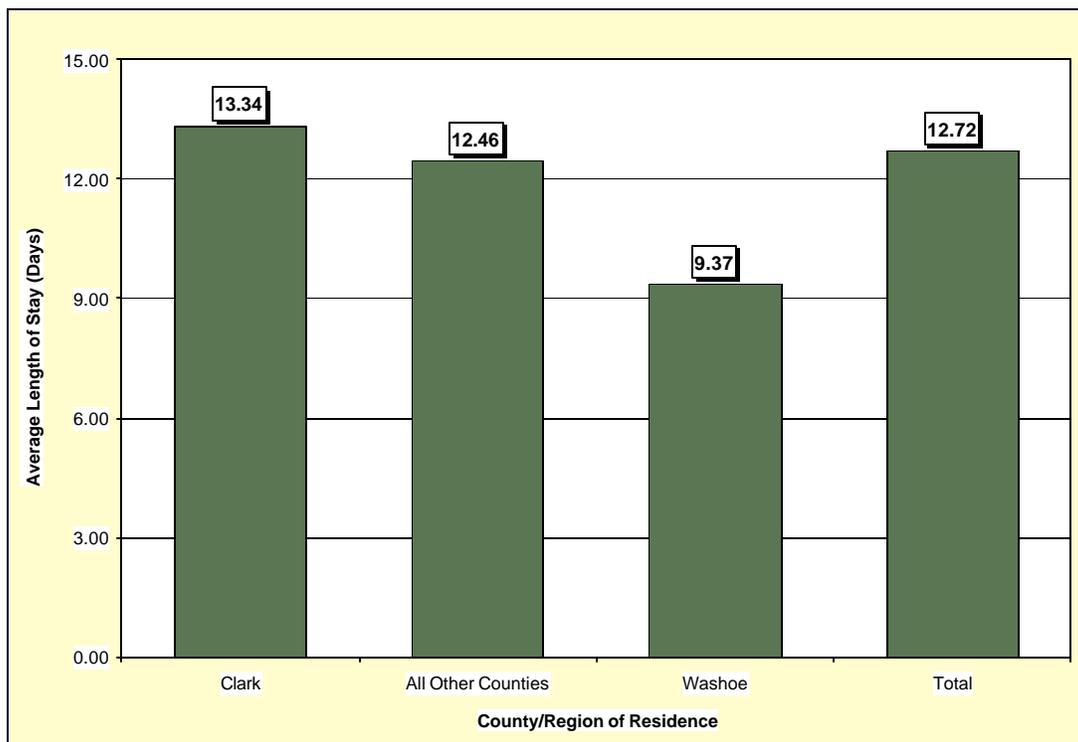


Table 200. Leukemia Inpatient Discharges by Gender, Charges, Length of Stay, and County/Region of Residence, Nevada Residents, 1997-2001

Category	County/Region of Residence				
	Nevada Total	Clark	Washoe	All Other Counties	Unknown
Total					
Discharges	1,080	807	138	134	1
Rate*	11.8	13.0	8.8	9.6	---
95% C.I.	(11.1-12.5)	(12.1-14.0)	(7.4-10.5)	(8.0-11.4)	---
Gender					
Male	628	468	77	82	1
Rate*	14.2	15.9	10.2	11.6	---
95% C.I.	(13.1-15.5)	(14.4-17.6)	(8.0-13.0)	(9.2-14.8)	---
Female	452	339	61	52	0
Rate*	9.6	10.6	7.6	7.5	---
95% C.I.	(8.7-10.5)	(9.5-11.8)	(5.8-9.7)	(5.6-9.9)	---
Other/Unknown	0	0	0	0	0
Inpatient Discharge Charges (\$)					
Total Charges	\$65,862,427	\$52,995,897	\$5,679,631	\$7,142,022	\$44,877
Average Charges	\$60,984	\$65,670	\$41,157	\$53,299	\$44,877
Median Charges	\$29,255	\$33,756	\$18,674	\$18,957	\$44,877
Discharge Length of Stay (LOS) (Days)					
Total LOS	13,736	10,764	1,293	1,670	9
Average LOS	12.7	13.3	9.4	12.5	9.0
Median LOS	7.0	8.0	5.5	7.0	9.0

* Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Note: The "---" is used for rates calculated on numbers less than ten. Caution should be used when comparing inpatient hospital discharge data to other data sources, since it is occurrence-based data. Please see Technical Notes for more information.

Table 201. Leukemia Inpatient Discharges by Age Group and County/Region of Residence, Nevada Residents, 1997-2001

Category	County/Region of Residence				
	Nevada Total	Clark	Washoe	All Other Counties	Unknown
Total					
Discharges	1,080	807	138	134	1
Rate*	11.1	12.1	8.2	9.6	---
95% C.I.	(10.4-11.8)	(11.3-12.9)	(6.8-9.6)	(8.0-11.2)	---
Age Group					
<1	8	8	0	0	0
Rate*	---	---	---	---	---
95% C.I.	---	---	---	---	---
1-4	73	62	3	8	0
Rate*	12.9	15.5	---	---	---
95% C.I.	(9.9-15.8)	(11.7-19.4)	---	---	---
5-14	135	119	10	6	0
Rate*	9.8	12.6	4.4	---	---
95% C.I.	(8.1-11.4)	(10.4-14.9)	(1.7-7.1)	---	---
15-24	58	38	9	11	0
Rate*	4.3	4.1	---	4.8	---
95% C.I.	(3.2-5.4)	(2.8-5.4)	---	(2.0-7.6)	---
25-34	66	50	7	9	0
Rate*	4.5	4.7	---	---	---
95% C.I.	(3.4-5.6)	(3.4-6.0)	---	---	---
35-44	55	42	9	4	0
Rate*	3.5	4.0	---	---	---
95% C.I.	(2.6-4.5)	(2.8-5.2)	---	---	---
45-54	94	61	18	15	0
Rate*	7.3	7.2	7.6	6.3	---
95% C.I.	(5.8-8.8)	(5.4-9.0)	(4.1-11.1)	(3.1-9.6)	---
55-64	171	120	26	24	1
Rate*	18.7	19.3	17.3	16.0	---
95% C.I.	(15.9-21.5)	(15.9-22.8)	(10.7-24.0)	(9.6-22.4)	---
65-74	222	163	27	32	0
Rate*	34.6	37.7	26.3	31.2	---
95% C.I.	(30.0-39.1)	(31.9-43.5)	(16.4-36.3)	(20.4-42.0)	---
75-84	152	111	27	14	0
Rate*	43.3	47.5	46.7	24.2	---
95% C.I.	(36.4-50.1)	(38.7-56.4)	(29.1-64.3)	(11.5-36.9)	---
85+	46	33	2	11	0
Rate*	60.3	70.7	---	70.9	---
95% C.I.	(42.9-77.8)	(46.6-94.8)	---	(29.0-112.8)	---
Unknown	0	0	0	0	0

* Rates are per 100,000 age-specific population.

Note: The "----" is used for rates calculated on numbers less than ten. Caution should be used when comparing inpatient hospital discharge data to other data sources, since it is occurrence-based data. Please see Technical Notes for more information.

Table 202. Leukemia Inpatient Discharges by Age Group and Gender, Nevada Residents, 1997-2001

Age Group	Gender		
	Male	Female	Total
<1	5	3	8
Rate*	---	---	---
95% C.I.	---	---	---
1-4	43	30	73
Rate*	14.8	10.8	12.9
95% C.I.	(10.4-19.3)	(6.9-14.7)	(9.9-15.8)
5-14	80	55	135
Rate*	11.3	8.2	9.8
95% C.I.	(8.8-13.7)	(6.0-10.4)	(8.1-11.4)
15-24	36	22	58
Rate*	5.2	3.4	4.3
95% C.I.	(3.5-6.9)	(2.0-4.8)	(3.2-5.4)
25-34	29	37	66
Rate*	3.8	5.2	4.5
95% C.I.	(2.4-5.2)	(3.5-6.9)	(3.4-5.6)
35-44	39	16	55
Rate*	4.8	2.1	3.5
95% C.I.	(3.3-6.4)	(1.1-3.2)	(2.6-4.5)
45-54	60	34	94
Rate*	9.2	5.4	7.3
95% C.I.	(6.9-11.6)	(3.6-7.2)	(5.8-8.8)
55-64	97	74	171
Rate*	21.3	16.0	18.7
95% C.I.	(17.1-25.6)	(12.4-19.7)	(15.9-21.5)
65-74	125	97	222
Rate*	39.4	29.8	34.6
95% C.I.	(32.5-46.4)	(23.9-35.8)	(30.0-39.1)
75-84	93	59	152
Rate*	58.7	30.6	43.3
95% C.I.	(46.7-70.6)	(22.8-38.4)	(36.4-50.1)
85+	21	25	46
Rate*	84.9	48.6	60.3
95% C.I.	(48.6-121.2)	(29.5-67.6)	(42.9-77.8)
Unknown	0	0	0
Total	628	452	1,080
Rate*	12.7	9.4	11.1
95% C.I.	(11.7-13.7)	(8.6-10.3)	(10.4-11.8)

* Rates are per 100,000 age-specific population.

Note: The "—" is used for rates calculated on numbers less than ten. Caution should be used when comparing inpatient hospital discharge data to other data sources, since it is occurrence-based data. Please see Technical Notes for more information.

Table 203. Leukemia Inpatient Discharges by County/Region of Residence, Nevada Residents, 1997-2001

County of Residence	1997-2001 Inpatient Hospital Discharges				
	Number	Rate*		Age-Adjusted Rate**	
		Rate	95% C.I.	Rate	95% C.I.
Carson City	25	10.0	(6.1-14.0)	9.8	(6.3-14.6)
Churchill	18	14.9	(8.0-21.8)	14.7	(8.6-24.0)
Clark	807	12.1	(11.3-12.9)	13.0	(12.1-14.0)
Douglas	17	8.3	(4.4-12.2)	8.7	(5.0-14.7)
Elko	3	---	---	---	---
Esmeralda	3	---	---	---	---
Eureka	3	---	---	---	---
Humboldt	1	---	---	---	---
Lander	1	---	---	---	---
Lincoln	0	---	---	---	---
Lyon	26	15.3	(9.4-21.2)	14.4	(9.2-21.7)
Mineral	2	---	---	---	---
Nye	30	19.1	(12.3-25.9)	15.1	(9.8-23.0)
Pershing	1	---	---	---	---
Storey	1	---	---	---	---
Washoe	138	8.2	(6.8-9.6)	8.8	(7.4-10.5)
White Pine	3	---	---	---	---
Unknown	1	---	---	---	---
Total	1,080	11.1	(10.4-11.8)	11.8	(11.1-12.5)

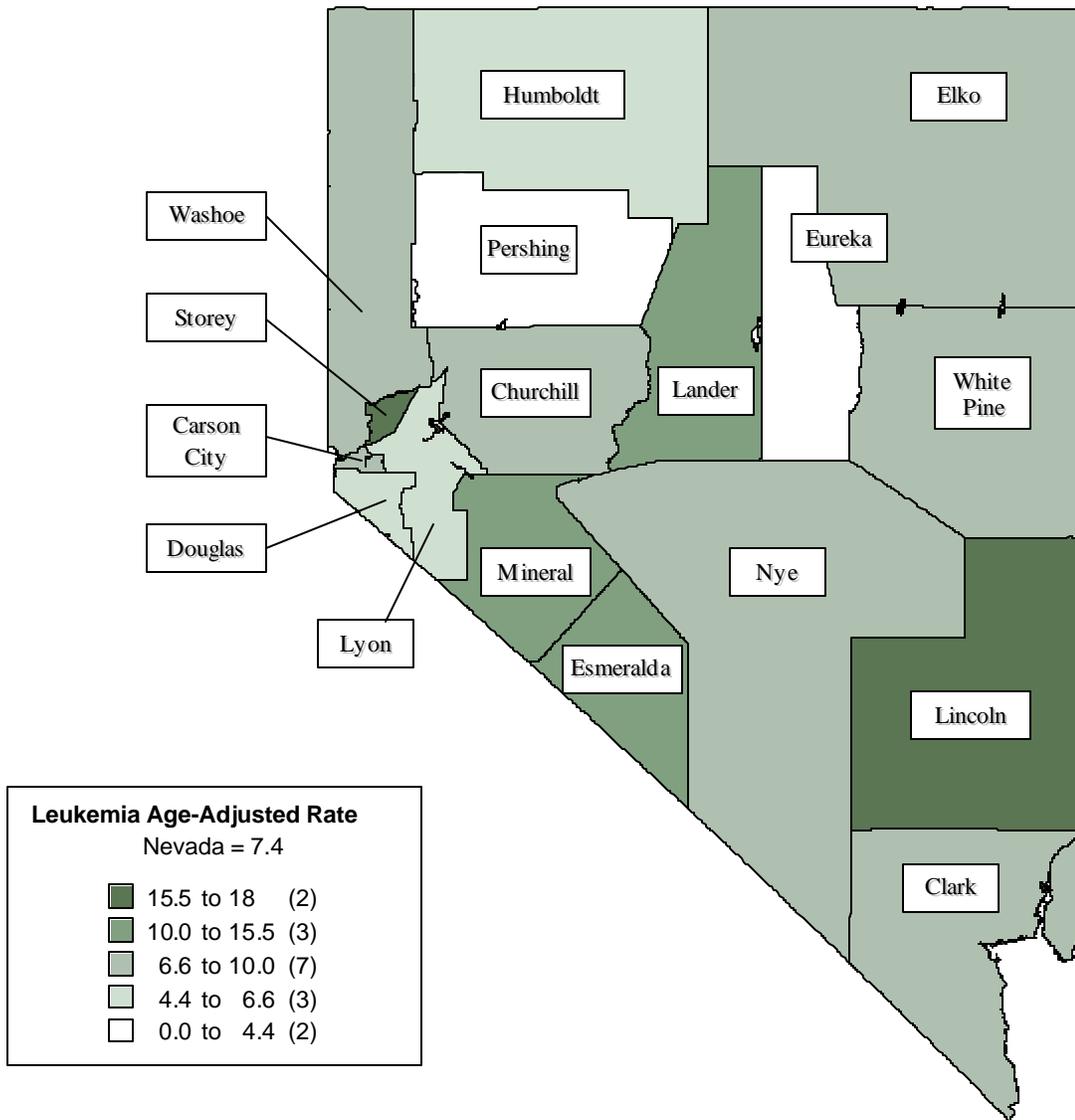
Note: The "----" is used for rates calculated on numbers less than ten. *Rates are per 100,000 population. **Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Table 204. Leukemia Inpatient Discharges by Age Group, Charges and Length of Stay, Nevada Residents, 1997-2001

Age Group	Discharges	Charges (\$)			Length of Stay (Days)		
		Total	Average	Median	Total	Average	Median
<1	8	556,633	69,579	47,004	111	13.9	7.0
1-4	73	2,788,065	38,193	33,300	650	8.9	8.0
5-14	135	6,287,314	46,573	27,120	1,186	8.8	6.0
15-24	58	3,963,881	68,343	43,611	893	15.4	9.5
25-34	66	5,524,571	83,706	49,527	1,032	15.6	7.0
35-44	55	4,469,412	81,262	57,144	975	17.7	13.0
45-54	94	7,168,510	76,261	39,948	1,556	16.6	10.0
55-64	171	12,657,275	74,019	36,155	2,523	14.8	9.0
65-74	222	15,693,670	70,692	36,421	3,094	13.9	8.0
75-84	152	5,996,789	39,453	18,729	1,446	9.5	6.5
85+	46	756,307	16,441	13,916	270	5.9	5.0
Unknown	0	---	---	---	---	---	---
Total	1,080	471,810	1,040	53,265	85	1,040.0	12.3

MORTALITY

Figure 135. Leukemia Age-Adjusted (2001) Mortality Rates, Nevada Residents, 1997-2001



Note: Rates are per 100,000 population and age-adjusted to 2001 US Standard population. Caution should be used when interpreting rates based upon small numbers. See Technical notes for more information.

Figure 136. Leukemia Age-Adjusted Mortality Rates by County/Region of Residence, Nevada Residents, 1997-2001

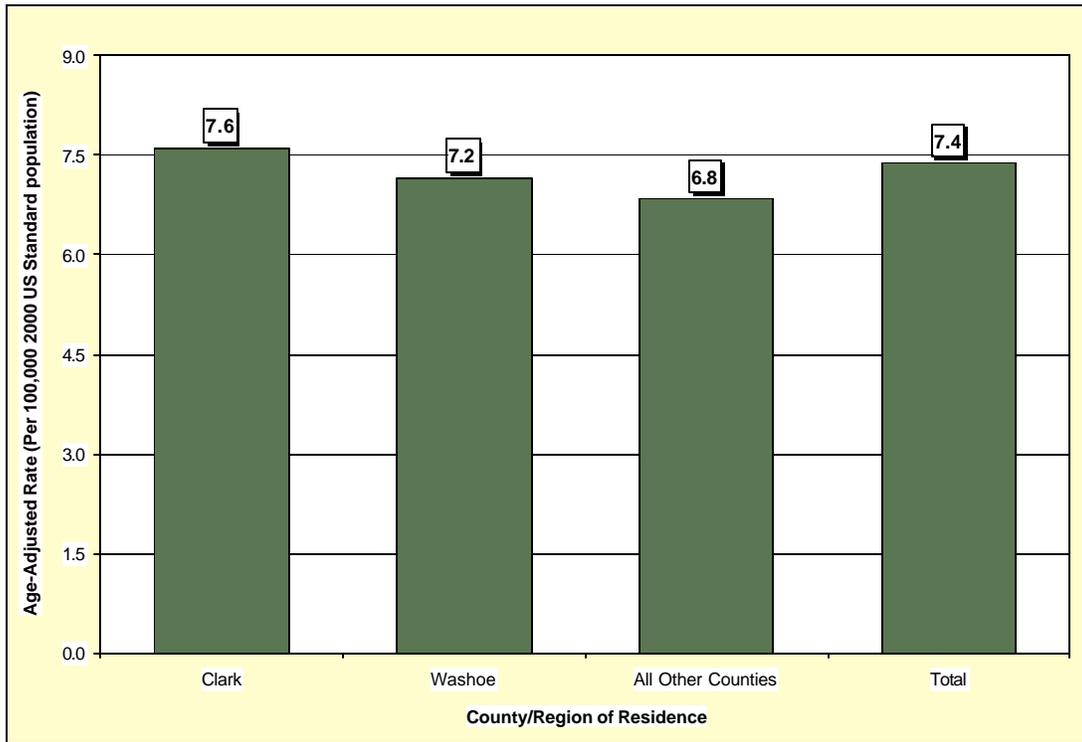


Figure 137. Leukemia Age-Adjusted Mortality Rates by Race/Ethnicity, Nevada Residents, 1997-2001

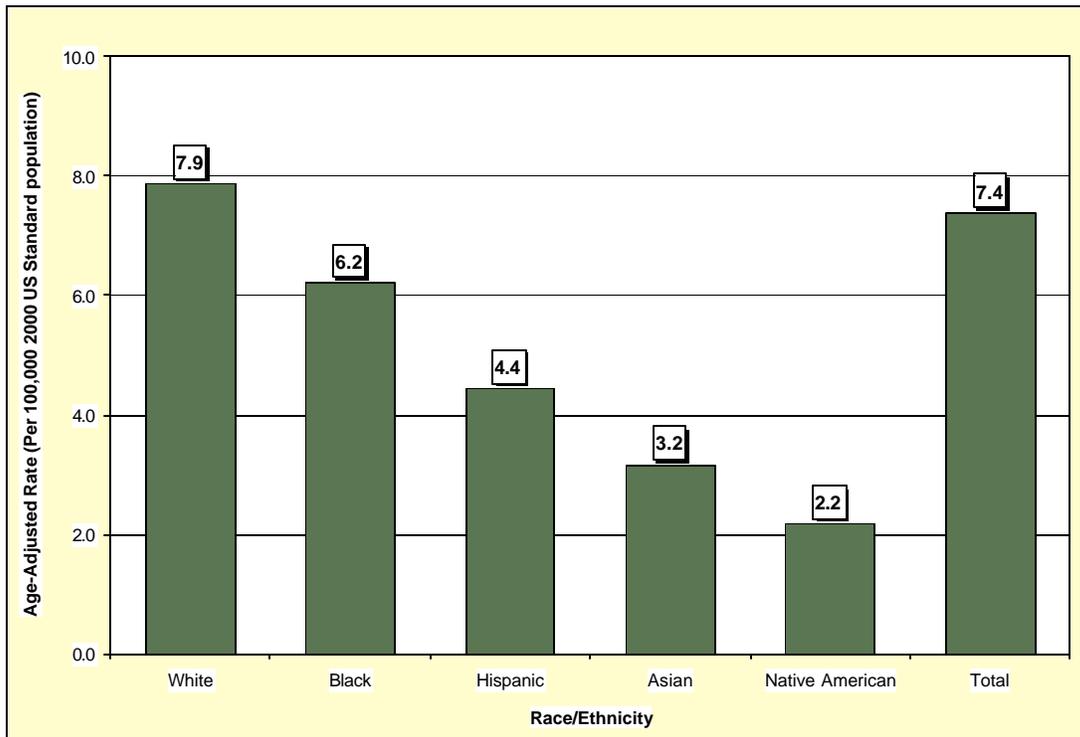


Table 205. Leukemia Mortality by Gender, Race/Ethnicity and County/Region of Residence, Nevada Residents, 1997-2001

Category	County/Region of Residence			
	Nevada Total	Clark	Washoe	All Other Counties
Total				
Mortality	614	419	104	91
Rate*	7.4	7.6	7.2	6.8
95% C.I.	(6.8-8.0)	(6.9-8.4)	(5.8-8.7)	(5.5-8.5)
Gender				
Male	368	256	60	52
Rate*	9.5	10.2	8.9	7.9
95% C.I.	(8.5-10.7)	(8.9-11.8)	(6.7-11.8)	(5.8-10.7)
Female	246	163	44	39
Rate*	5.6	5.5	5.7	5.7
95% C.I.	(4.9-6.3)	(4.7-6.5)	(4.1-7.6)	(4.0-7.8)
Other/Unknown	0	0	0	0
Race/Ethnicity				
White	539	360	96	83
Rate*	7.9	8.3	7.7	6.9
95% C.I.	(7.2-8.6)	(7.4-9.2)	(6.2-9.4)	(5.4-8.6)
Black	26	25	0	1
Rate*	6.2	6.6	---	---
95% C.I.	(3.9-9.9)	(4.0-10.6)	---	---
Native American	3	1	0	2
Rate*	---	---	---	---
95% C.I.	---	---	---	---
Asian	12	11	1	0
Rate*	3.2	3.7	---	---
95% C.I.	(1.5-8.3)	(1.7-10.4)	---	---
Hispanic	32	22	5	5
Rate*	4.4	4.3	---	---
95% C.I.	(2.8-7.2)	(2.4-7.8)	---	---
Other/Unknown	2	0	2	0

*Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Note: The "—" is used for rates calculated on numbers less than ten.

Table 206. Leukemia Mortality by Age Group and County/Region of Residence, Nevada Residents, 1997-2001

Category	County/Region of Residence			
	Nevada Total	Clark	Washoe	All Other Counties
Total				
Mortality	614	419	104	91
Rate*	6.3	6.3	6.2	6.5
95% C.I.	(5.8-6.8)	(5.7-6.9)	(5.0-7.4)	(5.2-7.8)
Age Group				
<1	2	1	0	1
Rate*	---	---	---	---
95% C.I.	---	---	---	---
1-4	5	2	2	1
Rate*	---	---	---	---
95% C.I.	---	---	---	---
5-14	9	7	2	0
Rate*	---	---	---	---
95% C.I.	---	---	---	---
15-24	13	9	2	2
Rate*	1.0	---	---	---
95% C.I.	(0.4-1.5)	---	---	---
25-34	10	7	1	2
Rate*	0.7	---	---	---
95% C.I.	(0.3-1.1)	---	---	---
35-44	23	18	4	1
Rate*	1.5	1.7	---	---
95% C.I.	(0.9-2.1)	(0.9-2.5)	---	---
45-54	52	36	10	6
Rate*	4.1	4.3	4.2	---
95% C.I.	(2.9-5.2)	(2.9-5.6)	(1.6-6.9)	---
55-64	91	60	17	14
Rate*	9.9	9.7	11.3	9.7
95% C.I.	(7.9-12.0)	(7.2-12.1)	(5.9-16.7)	(4.6-14.8)
65-74	155	106	26	23
Rate*	24.1	24.5	25.4	21.5
95% C.I.	(20.3-27.9)	(19.8-29.2)	(15.6-35.1)	(12.7-30.2)
75-84	187	130	32	25
Rate*	53.2	55.7	55.3	41.7
95% C.I.	(45.6-60.9)	(46.1-65.2)	(36.2-74.5)	(25.4-58.1)
85+	67	43	8	16
Rate*	87.9	92.1	---	114.0
95% C.I.	(66.8-108.9)	(64.6-119.6)	---	(58.2-169.9)
Unknown	0	0	0	0

* Rates are per 100,000 age-specific population.

Note: The "----" is used for rates calculated on numbers less than ten.

Table 207. Leukemia Mortality by County of Residence, Nevada Residents, 1997-2001

County of Residence	1997-2001 Mortality				
	Cases	Rate*		Age-Adjusted Rate**	
		Rate	95% C.I.	Rate	95% C.I.
Carson City	20	8.0	(4.5-11.5)	7.5	(4.5-11.7)
Churchill	7	---	---	---	---
Clark	419	6.3	(5.7-6.9)	7.6	(6.9-8.4)
Douglas	13	6.3	(2.9-9.8)	6.1	(3.1-11.2)
Elko	9	---	---	---	---
Esmeralda	1	---	---	---	---
Eureka	0	---	---	---	---
Humboldt	2	---	---	---	---
Lander	2	---	---	---	---
Lincoln	4	---	---	---	---
Lyon	11	6.5	(2.6-10.3)	6.0	(2.9-11.4)
Mineral	3	---	---	---	---
Nye	14	8.9	(4.2-13.6)	6.9	(3.6-12.9)
Pershing	0	---	---	---	---
Storey	1	---	---	---	---
Washoe	104	6.2	(5.0-7.4)	7.2	(5.8-8.7)
White Pine	4	---	---	---	---
Unknown	0	---	---	---	---
Total	614	6.3	(5.8-6.8)	7.4	(6.8-8.0)

Note: The "----" is used for rates calculated on numbers less than ten. *Rates are per 100,000 population. **Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Table 208. Leukemia Mortality by Race/Ethnicity and Gender, Nevada Residents, 1997-2001

Race/Ethnicity		Gender		
		Male	Female	Total
White	Mortality	322	217	539
	Rate*	10.0	6.0	7.9
	95% C.I.	(8.9-11.3)	(5.2-6.9)	(7.2-8.6)
Black	Mortality	14	12	26
	Rate*	7.5	5.4	6.2
	95% C.I.	(3.4-16.4)	(2.7-10.2)	(3.9-9.9)
Native American	Mortality	2	1	3
	Rate*	---	---	---
	95% C.I.	---	---	---
Asian	Mortality	8	4	12
	Rate*	---	---	3.2
	95% C.I.	---	---	(1.5-8.3)
Hispanic	Mortality	20	12	32
	Rate*	6.4	2.8	4.4
	95% C.I.	(3.5-13.0)	(1.3-6.3)	(2.8-7.2)
Other/Unknown	Mortality	2	0	2
	Rate*	---	---	---
	95% C.I.	---	---	---
Total	Mortality	368	246	614
	Rate*	9.5	5.6	7.4
	95% C.I.	(8.5-10.7)	(4.9-6.3)	(6.8-8.0)

Note: The "----" is used for rates calculated on numbers less than ten. *Rates are per 100,000 population. **Rates are per 100,000 population and are age-adjusted to the 2001 US Standard population.

Table 209. Leukemia Mortality by Age Group and Gender, Nevada Residents, 1997-2001

Age Group	Gender		
	Male	Female	Total
<1	2	0	2
Rate*	---	---	---
95% C.I.	---	---	---
1-4	1	4	5
Rate*	---	---	---
95% C.I.	---	---	---
5-14	4	5	9
Rate*	---	---	---
95% C.I.	---	---	---
15-24	9	4	13
Rate*	---	---	1.0
95% C.I.	---	---	(0.4-1.5)
25-34	4	6	10
Rate*	---	---	0.7
95% C.I.	---	---	(0.3-1.1)
35-44	14	9	23
Rate*	1.7	---	1.5
95% C.I.	(0.8-2.6)	---	(0.9-2.1)
45-54	35	17	52
Rate*	5.4	2.7	4.1
95% C.I.	(3.6-7.2)	(1.4-4.0)	(2.9-5.2)
55-64	57	34	91
Rate*	12.5	7.4	9.9
95% C.I.	(9.3-15.8)	(4.9-9.9)	(7.9-12.0)
65-74	99	56	155
Rate*	31.2	17.2	24.1
95% C.I.	(25.1-37.4)	(12.7-21.7)	(20.3-27.9)
75-84	116	71	187
Rate*	73.2	36.8	53.2
95% C.I.	(59.9-86.5)	(28.3-45.4)	(45.6-60.9)
85+	27	40	67
Rate*	109.1	77.7	87.9
95% C.I.	(68.0-150.3)	(53.6-101.8)	(66.8-108.9)
Unknown	0	0	0
Total	368	246	614
Rate*	7.4	5.1	6.3
95% C.I.	(6.7-8.2)	(4.5-5.8)	(5.8-6.8)

* Rates are per 100,000 age-specific population.

Note: The "---" is used for rates calculated on numbers less than ten.

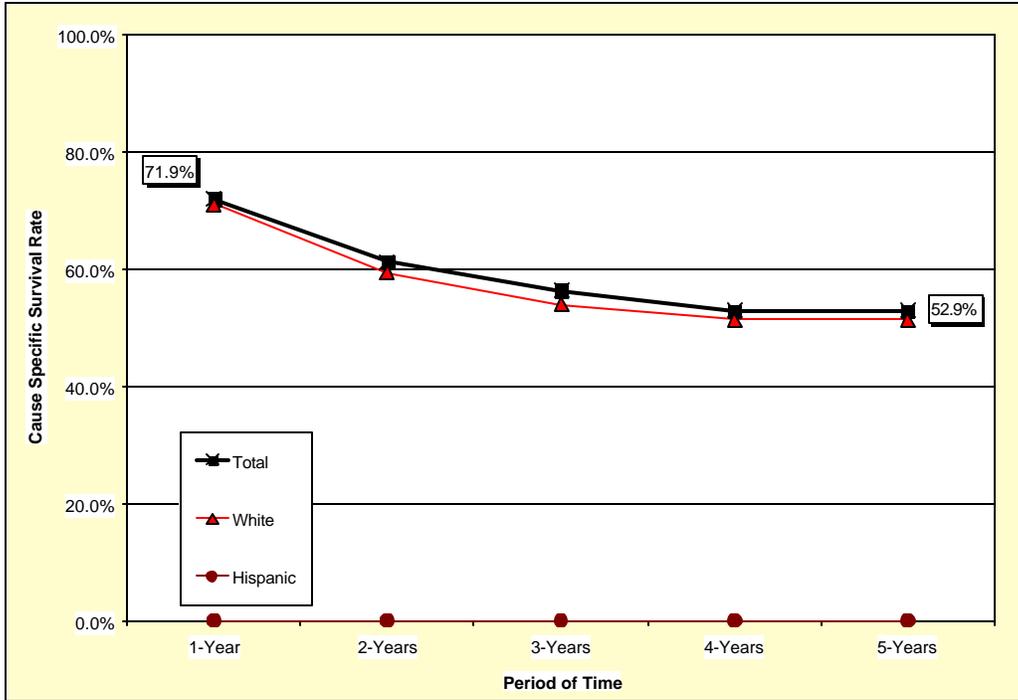
Table 210. Median Age at Death from Leukemia by Race/Ethnicity and Gender, Nevada Residents, 1997-2001

Race/Ethnicity	Gender					
	Male		Female		Total	
	Deaths	Median Age	Deaths	Median Age	Deaths	Median Age
White	322	72.0	217	74.0	539	73.0
Black	14	62.5	12	68.0	26	65.0
Native American	2	---	1	---	3	---
Asian	8	63.5	4	---	12	63.5
Hispanic	20	66.0	12	55.0	32	62.5
Other/Unknown	2	---	0	---	2	---
Total	368	71.0	246	73.0	614	72.0

Note: Those cases of other/unknown gender and/or unknown ages are not included in this table. The median age was not calculated for those numbers less than five.

SURVIVAL RATE

Figure 138. Survival Rates for Leukemia by Race/Ethnicity, Nevada Residents, 1997-2001



Notes: The survival rate for those racial/ethnic groups not included in this chart could not be calculated due to small cell size.

Figure 139. Survival Rates for Leukemia by Stage of Cancer at Diagnosis, Nevada Residents, 1997-2001

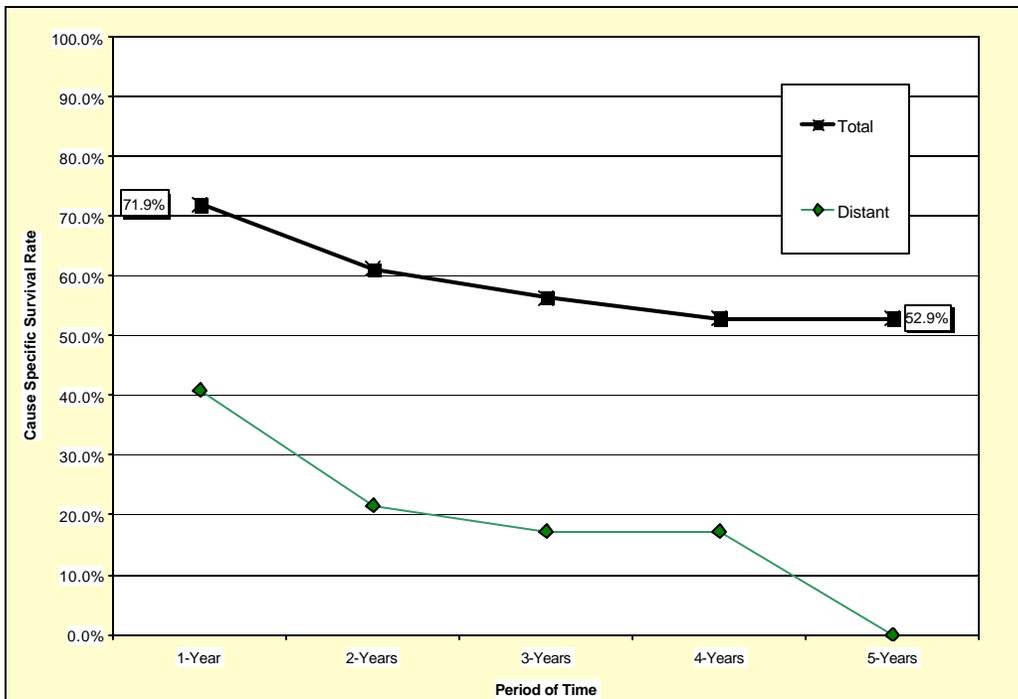


Table 211. Cause-Specific Survival Rates for Leukemia by Race/Ethnicity and Gender, Nevada Residents, 1997-2001

Race/ Ethnicity and Gender	Number of Cases	Cause Specific Survival Rate					Median Survival Time (years)
		One Year	Two Years	Three Years	Four Years	Five Years	
Total	560	55.9%	46.1%	41.1%	36.3%	30.5%	1.60
Male	338	55.2%	46.2%	41.0%	38.8%	33.3%	1.58
Female	222	57.1%	46.1%	41.4%	33.4%	27.3%	1.65
Race/Ethnicity							
White	461	53.5%	43.3%	37.9%	33.0%	28.3%	1.34
Male	282	52.9%	44.9%	38.7%	35.7%	35.7%	1.36
Female	179	54.4%	41.3%	37.1%	29.7%	21.2%	1.34
Black	15	---	---	---	---	---	---
Male	9	---	---	---	---	---	---
Female	6	---	---	---	---	---	---
Native American	5	---	---	---	---	---	---
Male	1	---	---	---	---	---	---
Female	4	---	---	---	---	---	---
Asian	18	---	---	---	---	---	---
Male	9	---	---	---	---	---	---
Female	9	---	---	---	---	---	---
Hispanic	58	67.3%	63.8%	58.0%	50.8%	38.1%	4.06
Male	36	---	---	---	---	---	---
Female	22	---	---	---	---	---	---

Notes: 1) The “---” indicates that survival rate could not be calculated due to small cell size. Caution should be used when interpreting survival rates based upon categories with a small number of cases. 2) Those cases where the gender and/or race/ethnicity were other/unknown, are not shown separately, but are included in the category totals. 3) These rates may not be directly comparable to National rates because of different methodologies. Caution should be used when trying to compare rates for Nevada and the Nation. For more information on the calculation of survival rates, please refer to Technical Notes section.

Table 212. Cause-Specific Survival Rates for Leukemia by Stage of Cancer at Diagnosis and Gender, Nevada Residents, 1997-2001

Survival Rate of Stage at Diagnosis		Gender		
		Total	Male	Female
Total	Cases	560	338	222
	One Year	55.9%	55.2%	57.1%
	5 Years	30.5%	33.3%	27.3%
	Median Survival	1.60	1.58	1.65
Stage at Diagnosis				
In situ	Cases	0	0	0
	One Year	---	---	---
	5 Years	---	---	---
	Median Survival	---	---	---
Localized	Cases	0	0	0
	One Year	---	---	---
	5 Years	---	---	---
	Median Survival	---	---	---
Regional	Cases	0	0	0
	One Year	---	---	---
	5 Years	---	---	---
	Median Survival	---	---	---
Distant	Cases	560	338	222
	One Year	55.9%	55.2%	57.1%
	5 Years	30.5%	33.3%	27.3%
	Median Survival	1.60	1.58	1.65
Unstaged	Cases	0	0	0
	One Year	---	---	---
	5 Years	---	---	---
	Median Survival	---	---	---

Notes: 1) The “---” indicates that survival rate could not be calculated due to small cell size. Caution should be used when interpreting survival rates based upon categories with a small number of cases. 2) These rates may not be directly comparable to National rates because of different methodologies. Caution should be used when trying to compare rates for Nevada and the Nation. For more information on the calculation of survival rates, please refer to Technical Notes section.